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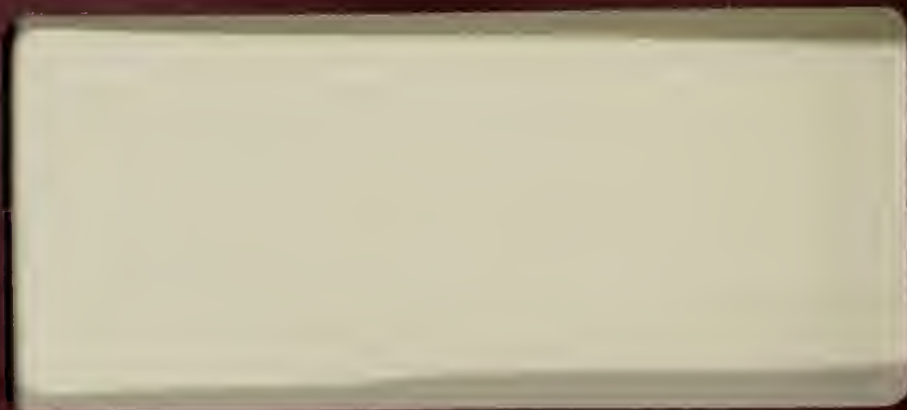
TAIWAN MARKET PROFILE

Stephen C. Schmidt
University of Illinois
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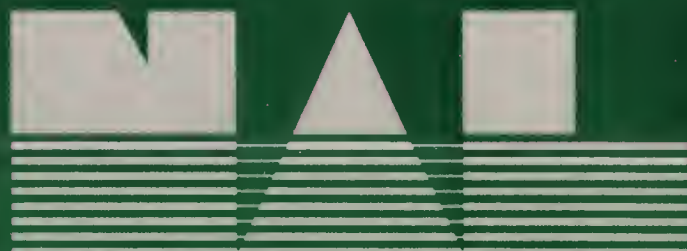


Agricultural Cooperative Service

United States Department of Agriculture



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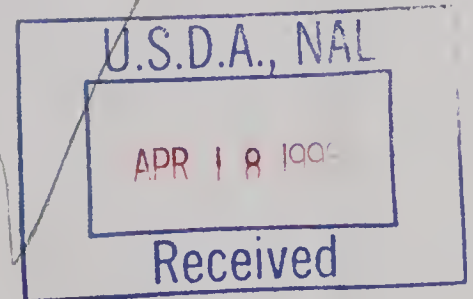


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Overview

Geography. Taiwan is an island nation of 19.7 million people with a density of 547 persons per square kilometer - one of the most densely populated areas of the world. The island lies 80-125 miles off the southeastern coast of the Chinese mainland and about 665 miles southwest of Japan and 225 miles north of the Philippines, is about 245 miles long and 60-90 miles wide. Total land area is 13,900 square miles, but about two-thirds of the land is highly mountainous and not arable (Table 1). The Central Mountain Range that extends the length of the island has a peak nearly 13,000 feet high. In addition to the island of Taiwan, there are over 77 offshore islands, including the Pescadores, Quemoy, Matsu and Orchid Island under the control of Taiwan.

Owing to its geographic position, Taiwan plays a significant role in trade, transportation and tourism in East Asia. Taiwan has a well developed infrastructure notably a first-grade internal transportation network. Taiwan has five international harbors: Keelung in the north, Kaohsiung in the south, Hualien in the east, Taichung in the west and Suao port near Hualien. Kaohsiung and Keelung are the two major ports. Kaohsiung harbor handles about two-thirds of the island's total imports and exports. It also has the largest container wharf in the Far East.

The climate is subtropic in the north and tropical in the south. The average annual temperature ranges from 62 in December to 80 in July.

Population and labor force. Population growth has slowed markedly since the 1960s reflecting a combination of increase in age at marriage, sharp decline in family size and official promotion of family planning since 1969.¹ The population growth rate fell to 1.12 percent by 1987. The population is highly youthful as about 41 percent is under age 20.

Table 1. Profile of Taiwan

Capital: Taipei (pop. 2.3 million)	Labor force (1987): 8.2 million
Other cities: Kaohsiung (1.2 million), Taichung (636,224), Tainan (621,398), Keelung (352,214)	
Population (1987): 19.7 million	Agricultural population: 4.2 million
Annual growth rate: 1.12 percent	Agricultural labor: 15.3 percent
Urban population: 78 percent	Industry: 43.1 percent
Population density: 547 per sq km	Service: 41.6 percent
Native language: Mandarin Chinese	
Area: 14,000 sq. mi. (35,981 sq. km.)	
Agricultural: 30 percent	
Arable: 25 percent	
Forested: 59 percent	
Cropland: 19 percent	
Gross Domestic Product (1987): \$86.2 billion	
Annual growth rate: 11.2 percent	
Per capita GDP (1987): \$4,989	
Shares of GDP:	
Agriculture: 6.1 percent	
Manufacturing: 39.1 percent	
Service: 24.0 percent	
Construction: 4.7 percent	
Climate: Maritime subtropical with June-September the wettest and hottest period.	
The island suffers periodic damage from typhoons and earthquakes.	
Natural resources: Small deposits of coal, natural gas, limestone, marble and asbestos.	
Agricultural products: Sugar cane, lumber, sweet potatoes, rice, asparagus, mushrooms, citrus fruits, pineapple, bananas, peanuts, pears.	
Trade (1987):	
Total exports, f.o.b.: \$53.5 billion	
Total imports, c.i.f.: \$34.5 billion	
Trade balance: \$19.0 billion	
Foreign exchange reserves: \$76.7 billion	
Foreign debt: \$ 2.5 billion	
Debt service as percent of exports: 5.3 percent	
Total exports to U.S., f.o.b.: \$23.6 billion	
Total imports from U.S., c.i.f.: \$ 7.3 billion	
Trade balance: \$16.3 billion	
U.S. share of exports: 44.1 percent	
U.S. share of imports: 22.1 percent	
Principal exports to U.S.: Electronic/electrical goods, textiles/apparel, machinery and footwear	
Principal imports from U.S.: Electronic/electrical goods, chemicals, food, wine, cigarettes, machinery, soybeans, corn	
Total agricultural exports, c.i.f.: \$ 3.9 billion	
Total agricultural exports, f.o.b.: \$ 2.0 billion	
Trade balance: \$-1.9 billion	
Total agricultural imports from U.S., c.i.f.: \$1.6 billion	
Total agricultural exports to U.S., f.o.b.: \$181 million	
Share of agricultural imports from U.S.: 42 percent	
Share of agricultural exports to U.S.: 9 percent	
Main food and agricultural imports: corn, soybeans, wheat, cotton and logs	
Main food and agricultural imports from U.S.: soybeans, corn, wheat and fruits	
Currency: New Taiwan dollar	
Exchange Rate: 1987 U.S. \$ - NT \$31.58 period average; U.S.\$ - NT\$29.08, Oct. 1988	
The new Taiwan dollar is allowed to float.	

Since 1968, free public education is provided through the ninth grade. Higher education also receives strong public financial support as shown by an extensive system of universities, colleges and junior colleges with an enrollment of about 400,000 students.

In 1987, around 8.02 million civilians were employed, representing 98.9 percent of the labor force. Some 180,000 to 200,000 new workers enter the labor pool every year. Taiwan has had virtually full employment for over a decade.

The official Chinese language dialect is Mandarin. English and Japanese are two major languages used in Taiwan because of business requirements.

Government and legislation. Regarded now as a breakaway province by Peking, Taiwan is considered as an integral part of China by both the government in Taipei and that in Peking. The government in Taipei claims to be the legitimate ruler of all of China and calls Taiwan the Republic of China (ROC). The government consists of five branches performing executive, legislative, judicial, examination and control functions. The National Assembly is empowered to elect the President and Vice President and to revise the Constitution. The Executive Yuan (Cabinet) is the highest administrative organ, headed by the Premier. The Legislative Yuan enacts laws, passes budgetary bills and monitors the administrative activities of the Executive Yuan. The Control Yuan has a supervisory role dealing with security matters, censure and audit. The Examination Yuan is empowered to examine and select government officials and establish pay scales, etc.

External relations. Official relations between the U.S. and Taiwan changed with the U.S. diplomatic recognition of the PRC on January 1, 1979.

In the U.S.-PRC joint communique the United States recognized the Government of the PRC as the sole legal government of China and that Taiwan is part of China. Unofficial relations with Taiwan were laid out in the Taiwan Relations Act, PL96-8 (TRA) providing for establishment of the American Institute in Taiwan (AIT). The AIT is a nonprofit corporation incorporated under the laws of the District of Columbia and has since acted as the unofficial U.S. embassy. The AIT is authorized to accept visa and passport applications and to provide assistance to U.S. citizens in Taiwan. It is also entrusted with the conduct of U.S.-Taiwanese commercial relations and the operation of American Trade Center in Taipei. Taiwan's interests in the U.S. are represented by the Coordination Council for North American Affairs (CCNAA) with field offices in Washington D.C. and 10 other U.S. cities.

A political liberalization process began in December 1986 with the election for the first time of candidates representing an opposition party, the Democratic Progressive Party, to the National Assembly and Legislative Yuan. The ban on new political parties was lifted excepting parties that espouse communism or separation for Taiwan from mainland China.

On April 13, 1987, China and Portugal signed an agreement on the future of Macau, under which the small Portuguese enclave will revert to Chinese sovereignty in 1999, but will continue to enjoy a period of 50 years of capitalist economic system. The agreement is patterned after the one concluded in 1984 with the U.K. for Hong Kong, and is also what is an offer from Peking for Taiwan. China's desire to regain Taiwan is one of the strongest cards in Hong Kong's favor: as the Chinese leadership is well aware that if the Hong Kong experiment doesn't work, Taiwan will not rejoin the mainland in the foreseeable future.

China has put forward several economic arguments for reunification including, 1. complementarities between China's raw materials and energy supplies and Taiwan's reprocessing facilities; 2. Taiwan's high tech and China's reserves of manpower; and 3. the import potential of China for Taiwanese exports. Peking has announced that Taiwan could keep its armed forces, its legal and judicial system and limited diplomatic powers. Chinese leaders said that they wanted reunification with Taiwan by the year 2000.

Economic Situation and Trends

Economic growth. Over the past three decades Taiwan has changed from an under-developed agricultural economy to an industrialized economy. The island has entered the front ranks of the newly industrialized countries with a potential to join the ranks of the developed economies by the year 2000. The government plans to quadruple per capita GNP by the year 2000, providing the inhabitants of Taiwan with housing, transport and telecommunications at levels currently enjoyed by the people in the developed countries.

The island nation has had one of the world's highest sustained economic growth rates and economists widely consider Taiwan to be the foremost success story in the world. The economy has grown at average annual rate of 9 percent since 1952 and at 14.5 percent a year over the decade of 1975-85. With the slowdown in the world economy beginning in 1980, the island's economic growth decelerated to 6.4 percent a year between 1981 and 1985 which is far short of the country's apparent long-run growth path. Growth

slowed to a meager 4 percent in 1985, but recovered in 1986 staging a robust 11.6 percent real growth rate.

Taiwan's economy also achieved a near record performance in 1987. Supported by strong export and domestic demand, the economy grew at just over 11 percent, its second best growth performance of the 1980's (Table 1).

GDP was recorded at \$86.2 billion in 1987 and per capita GDP at \$4,989. Industrial output steadily increased its share of domestic product since the 1960s and by 1987 manufacturing, mining and construction accounted for about 44.3 percent of GDP and employed respectively 43.1 percent of the labor force. Service industries contributed about 27.1 percent to GDP.

Although Taiwan's per capita GDP is the fourth highest in Asia, its level still lags well behind that of the industrially advanced countries. Distribution of income, however, has been remarkably equitable. Taiwan's economic development has been shaped by large supplies of high quality labor, access to a low cost pool of savings to draw upon for investment, by pragmatic central economic development plans, promulgated since 1953, and responsiveness to evolving world trade opportunities.²

Planning in Taiwan mostly takes the form of suggestions to the private sector, backed up with fiscal, monetary and trade policies and the provision of infrastructure. Government plays key roles in energy and heavy industry sectors and has controlling influence over the financial sector and over certain prices. The Council for Economic Planning and Development has targeted in the current four year plan (1986-1989) an average annual real GNP growth of 6.5 percent. When this growth target is achieved Taiwan's GNP will increase to an estimated \$90 billion by 1989 and per capita GNP will reach \$4,439. By far the largest share of investment is financed out of

domestic savings, which in 1987 amounted to 39.9 percent of GNP, representing the second highest average savings rate in the world (behind Japan).

Economic growth has been very dependent on foreign trade because of limited natural resources and high population density. Hence, changes in external factors, notably world prices for the island's imports and the competitiveness of its export industries had a major impact on the pace of economic development. The impact of this dependency became apparent during the recession of 1982 and loss of competitiveness in 1985. With a 40 percent growth in its foreign trade, the island became the 13th largest trading nation in 1987.

Industrial organization. Small and medium-size low technology light industries and the assembly of imported inputs for consumer goods still are the backbone of Taiwan's economy accounting for 65 percent of the nation's exports and employing some 70 percent of the total work force.³ Due to a tight labor market (unemployment rate of 2.0 percent), wages have increased much faster than productivity in recent years, thus, eroding Taiwan's traditional comparative advantage in labor intensive industries. Authorities are concerned that an upturn in inflation is imminent. Taiwan's manufacturers are facing growing competition from other Asian countries such as Sri Lanka, Indonesia and China, that also produce labor-intensive, inexpensive goods.⁴ Apart from rising Taiwanese wages, competition became keener because the currencies of other exporting Asian nations such as Hong Kong and South Korea have not appreciated as much against the U.S. dollar. Moreover, Taiwan has become vulnerable to foreign protectionist measures.

Taiwanese authorities realize that in order to sustain the island's economic momentum and growth of foreign trade, industry has to make its products more competitive internationally. This means shifting the country's economy from its present light, labor-intensive base toward one that is more diversified and more automated and can produce higher quality and high technology goods. To promote such technology-intensive growth path authorities have taken a number of steps ranging from the designation of technologically advanced products for which investment and production will be supported to the opening of the Hsinchu Science-based Industrial park.⁵ Part of the new development strategy is requiring manufacturing firms to devote a certain minimum percentage of their annual revenue to research and development if they wish to qualify for the five-year tax holiday that any company, foreign or domestic, receives from any investment here.⁶ An important element of the industrial restructuring program is increased domestic and foreign investment. Domestic investment now stands at 20.8 percent of GNP.⁷

Foreign investment. Direct foreign investment is encouraged by the government for projects which are considered strategic or vital to the ongoing economic transformation of the country. Led by U.S. and Japanese interests in the electrical products and service industries, new foreign investment approvals rose to a record \$1.4 billion in 1987.⁸ While approved U.S. investments were slightly ahead of Japanese investments in 1987, most were in existing plants. In contrast, Japan led the field in new investment projects. A combination of the high yen, fear of restrictive U.S. import policies and the lure of lower cost of production offshore has enticed many Japanese manufacturers to invest in Taiwan. The government is keen to

attract Japanese high technology: several missions were mounted in 1986 in order to offer preferential terms. The car and electronics industries have benefited from this trend. Authorities are also encouraging joint ventures with U.S. corporations.

Some 15 service industries were recently opened to foreign investors including fast food, supermarket, chain store, retail and wholesale business, etc. More foreign retailers are collaborating with local firms to take advantage of such investment opportunities. The Dutch SHV international supermarket chain is to set up its largest Southeast Asian supermarket in Taiwan, and is currently considering cooperation with several local corporations. Another Ponderosa steak house is planned for Taipei and American Dairy Queen, Inc. is setting up an outlet in Taiwan. A fifty-fifty joint venture between Taiwan's largest food company, President Enterprises Corporation, and General Foods worth \$66.7 million has been approved and started up in April 1987 producing canned food, dairy products, bakery products, soy sauce and milk powder.⁹

Development goals. In addition to the development of the service sector, other critical tasks facing Taiwanese authorities include the development of 1. an international marketing network; 2. modern enterprise management technique; and 3. expansion of skilled labor pool. A value-added tax system was introduced on April 1, 1986. It was designed to help in streamlining the nation's overall tax structure and relieving the tax burden on manufacturers, distributors and consumers. It has enhanced the competitiveness of Taiwanese goods.

It remains to be seen how concerns over Taiwan's loss of U.S. GSP status, the possibility of further appreciation of the new Taiwan dollar and

rising cost of labor, currently up 10 percent per year on average, will affect domestic and foreign investments. Taiwanese outward direct investments rose \$103 million in 1987. Favored destinations include Southeast Asia, China, the U.S. and Mexico (Maquiladore border factories).

Agricultural Setting

Policy goals. Taiwan's agricultural policy goals are 1. maintenance of self-sufficiency in a few staples; 2. enhancement of farmers' incomes and narrowing of the income gap between farmers and non-farmers; 3. improvement of the rural environment and advancement of social welfare for farmers; and 4. encouraging the processing and export of products with overseas sales potential. To achieve these goals the government instituted a series of measures and programs including the promotion of farm mechanization, a guaranteed price system, investment in infrastructure, interest subsidies for farm production loans and provision of loans for enlarging the scale of farm operations, and promotion of agriculture based industries in rural areas.¹⁰ The size of average holding has declined over time as farmers have divided their farms among their sons in keeping with Chinese customs. The current farm size of 1.15 hectares (2.84 acres) is too small for effective mechanization and modernization of agricultural production. Hence, high priority is placed on programs facilitating farmland consolidation.

Production pattern. Despite the high productivity of the agricultural sector, increases in agricultural production have been much slower than industrial production. Moreover, Taiwan's agriculture failed to meet the production target set in recent years. Between 1981 and 1985, the agricultural industry grew at an average annual rate of 1.1 percent, falling

short of the government's projected target of 2.4 percent. Within this industry, the crop sector grew at a rate of -0.4 percent, the forestry sector at a rate of -2.1 percent, the fishery sector at 3.5 percent and the livestock sector at 5.7 percent. Although food production in this period increased by an annual rate of 1.7 percent Taiwan's self-sufficiency rate of food supply has remained virtually unchanged at 93 percent (Appendix Table 1). In 1986, the country had a surplus of 10 percent in rice, an 18 percent surplus in pork and was self-sufficient in poultry meat, eggs, fish, shrimp and fruit. It produced only 9 percent of its beef and mutton and 12 percent of its dairy product consumption requirements. The island had a 10 percent self-sufficiency in coarse grains, 1 percent in soybeans and relies entirely on imports for wheat.¹¹

Agriculture continues to decline in relative importance in Taiwan's increasingly industrial economy. Its share in domestic income fell from 25 percent in 1968 to only about 6 percent in 1987. The number of farmers in the total employment structure has similarly fallen from 43.7 percent to 15.3 percent. Agricultural products supplied a mere 2.8 percent of exports in 1987. The agricultural population was 21.5 percent of the total population (Table 1).

With a rapid increase in industrial employment, the farmer has faced rising labor costs and off-farm input costs required with new production technology. Higher production costs have adversely affected farm income which now amounts to around 70 percent of his urban counterpart, or \$10,603 a year in 1987. Not surprisingly attracted by higher paying jobs in manufacturing, construction, and services a large number of farm people left for the cities, especially among the younger farm people.¹² More and more

farm families have turned to part-time farming in part because of easy access to industrial employment and in part because of higher wages available in industry. At least 70 percent of farm income originates from non-farming sources, the reverse of South Korea. Off-farm income of farm people not only reduced the desire for larger farms but also diminished their willingness to continue farming as intensively as before.¹³ In light of these trends along with an anticipated increase in farm land prices part-time farming seems an inevitable trend in Taiwan's agriculture and a consequent slow-down in growth in agricultural production.¹⁴

Crop production. Taiwan's agricultural base is small. The area potentially available for cultivation is estimated at 2.6 million acres (1.07 million hectares), about 30 percent of the island's total land area. Of this potential cropland, only about 2.2 million acres (900,000 hectares) are actually cultivated. Most of Taiwan's arable land lies in the broad plains along the western side of the island and along the fertile slope of the north-south mountain range. On the eastern side of the ranges the mountains drop sharply to the sea, and there is little land suitable for cultivation. Under a subtropical and tropical climate together with good irrigation, this land is intensively cultivated year-round. Abundant rainfall throughout the inland provides the basis for irrigating most level farmland. Two and even three crops a year can be produced in some areas. Major crops are rice, sugarcane, sweet potatoes, tea, bananas, and pineapples. The main vegetables grown on the island include asparagus, bamboo shoots, cabbage, cucumbers, cauliflower, celery, onions, eggplants, tomatoes, peas and mushrooms.

Over the years, the area planted to various crops has undergone major changes. Areas planted to rice, sweet potatoes and bananas fell while production of a broad range of fruit and vegetables has increased in response to changing domestic demand and, in some cases, growing export opportunities. Overall, the product mix has changed with proportionately more livestock and fishery products and high-value export crops.

Rice production, the most important crop in Taiwan, has far exceeded domestic consumption since the early 1970's and its disposal has become a burden on the national treasury. To improve the allocation of agricultural resources and lighten the burden on the national treasury a six year (1984-89) Riceland Diversion Program and rice-for-feed program was launched. Under the former program the area devoted to rice is to be cut from 614,300 to 515,500 hectares and the area thus released shifted to other crops such as fruit, vegetables, corn, sorghum and soybeans.¹⁵ To relieve the surplus problem, the Government has released annually 300,000 tons of rice for feed and boosted exports to 173,114 tons in 1986. Despite the government efforts, the nation ended up with 1.2 million tons of surplus rice in 1987. And while the popularity of Western restaurants isn't responsible for all that rice piling up, it certainly hasn't helped cut the surplus.

Livestock production. The livestock industry stands out as a fast-growing agribusiness that averaged 8 percent growth from 1975-1984. Taiwan not only produces enough pork for its population, but has surpluses for export.

The hog industry is the leading sector of Taiwan's agricultural production. In 1987, hog production contributed nearly 26 percent of the value of total agricultural production compared with rice's 21.2 percent.

Hog production has increased steadily since 1983 in response to cheap feed prices and high profits. Abundant pork supplies, however, kept prices depressed throughout most of 1984 and 1985 prompting authorities to step-up exports to reduce oversupply.¹⁶ Weak hog prices slowed the growth of pork production in 1986 and 1987 with output estimated at 938,000 tons in 1987. A combination of low feed prices, the removal of the domestic slaughter tax in April 1987, reduced Japanese import prices due to the strengthened yen were factors bolstering pork production in 1987. In 1988, production has slightly exceeded the 1987 level and the forecast for 1989 anticipates a leveling off of pork production, largely in response to a likely stagnation in the Japanese import market along with producer concerns over the costs of the "waste water standards" set for hog farms. Since February 1988, pig farmers may be fined \$400-2,000 for flushing sewerage water from farms which does not meet certain hygienic standards.¹⁷ So successful are the various pig breeding programs that Taiwan has become a breeding pig exporting country in Asia.

Poultry ranks second to pork in the value of meat production. Taiwan has long been self-sufficient in eggs and broilers as a result of commercialized operations, many of which raise 200,000 birds. Poultry meat production has reached 400,000 tons in 1987, but dipped to 380,000 tons in 1988.

Taiwan's cattle industry is still under-developed. Except for water buffalo, the number of other types of cattle are insignificant. Taiwan's cattle population was stationary between 1983 and 1985 at around 130,000 heads but expanded sharply since 1986 reaching 172,000 head in 1988.

Until 1985 Taiwanese authorities favored the development of the dairy sector through programs of technical improvement, price support and by import of dairy heifers. The quality sought in imported animals were their heat resistance and reproductive performance.

Currently, equal emphasis is placed on the expansion of dairy and beef production by providing five-year loans with 7.5 percent interest and two-year "holidays" before repayment begins. The new policy is designed to prevent reductions in Taiwan's beef herd which has shrunk between 1981 and 1985.¹⁸

Foreign Trade

Overall trends. Taiwan currently enjoys commercial relations with more than 150 nations. Foreign trade is the mainstay of Taiwan's economy as export markets absorbed 62 percent of the total GDP in 1987 while exports and imports combined represented 102 percent of GDP. Taiwan's economic policy goal is for export industries to account for 80 percent of GDP by 1989.

In 1987, two-way trade totaled \$88 billion, up 37 percent over 1986. Exports surged 34.4 percent to 53.5 billion in 1987, while imports rose 42.5 percent to \$34.5 billion in 1987. This was the first time in over a decade, that imports grew at a faster rate than exports. It reflects the appreciation of the new Taiwan dollar relative to the U.S. dollar and a reduction in tariff rates on a large number of imports. In an effort to narrow the trade imbalance with the U.S., Taiwan has allowed its currency to appreciate against the U.S. dollar; between September 1985 and October 1988, the Taiwanese currency appreciated 27.6 percent against the U.S. dollar.

The strength of the U.S. dollar since mid-1988 has eased pressure for further currency appreciation. With the appreciation of the Taiwan dollar, Taiwanese products have become more expensive and less competitive abroad, thus slowing export growth. On the other hand, imports with cheaper prices have increased.¹⁹

Taiwan's vigorous export activity together with limited market access for imports has resulted in a surplus in its worldwide trade balance, except for the recession of 1974-75, in the last two decades.

Taiwan's trade surplus totaled a record \$19 billion in 1987. Growing trade surpluses have pushed Taiwan's foreign exchange reserves (excluding gold) to \$77 billion by 1987, said to be the second biggest after Japan.

Up to the 1970s Taiwan enjoyed a comfortable agricultural trade surplus. Since then the trade surplus in agricultural products reversed itself, and by 1987 the import value exceeded the export value by about \$1.4 billion. Between 1982 and 1987 imports of agricultural products rose from \$2.4 billion to \$3.9 billion while exports went from \$1.2 billion to \$1.9 billion.

Country distribution of trade. The United States, Japan, Hong Kong, the EC, Saudi Arabia, Australia and ASEAN are Taiwan's major trading partners purchasing over 85 percent of its exports and supplying about 74 percent of its imports in recent years. Most of the island's trading partners incur deficits in their trade with Taiwan. The U.S. suffered the largest trade deficit while Japan and the Middle Eastern oil exporting countries were enjoying trade surpluses with Taiwan.

The United States is Taiwan's largest two-way trading partner, its largest market for exports and ranked second behind Japan as the island's

largest source of imports. The U.S. took 44.1 percent of Taiwan's total exports but supplied only 22.1 percent of Taiwan's total imports in 1987. For the first half of 1988, the U.S. export share fell to 34 percent and import market share rose to 28.2 percent.

Trade between the U.S. and Taiwan amounted to \$30.9 billion in 1987 compared with \$25.2 billion the previous year. Taiwan exports to the U.S., \$23.6 billion in 1987, historically account for the bulk of this two-way trade and have resulted in a chronic bilateral trade imbalance. From \$291 million in 1975, the trade gap grew to \$16.3 billion in 1987. Taiwan runs the world's third largest trade surplus with the U.S. after Japan and Canada.

Taiwan was America's fifth largest trading partner in 1987 and became the fourth largest supplier of U.S. imports and ninth largest export market.

It is of interest to note that our trade gap with this nation does differ importantly from our deficit with many other countries. American firms were not only helping the Taiwanese get started in various products but many of them operate their own Taiwanese factories solely to ship products back home.²⁰

Japan is Taiwan's second largest trading partner, its largest supplier of imports overall, and second largest export market. Taiwan exported \$6.9 billion worth of goods to Japan and imported \$11.9 billion worth from that country leaving a deficit of \$5.0 billion in 1987. This trade represented 12.9 percent of Taiwan's exports and covered 34.3 percent of its imports. The high level of imports reflects Taiwan's heavy dependency on Japanese capital goods and iron and steel products, and transportation equipment as well as geographic proximity and historical economic relations.

In 1987, Taiwan's two-way trade with Western Europe amounted to \$11.2 billion accounting for 12.9 percent of its total foreign trade. This trade consisted of \$6.9 billion worth of exports and \$4.3 billion worth of imports. This high level trade resulted from the sharp appreciation of major European currencies against the U.S. dollar. With the sharp rise in the value of the Japanese yen, Taiwan also tried to import more capital goods as well as technology from Europe.

Southeast Asia too is an important trading partner of Taiwan. In 1986 two-way trade with this region totaled \$7.6 billion made up of \$5.4 billion worth of machinery, tools and whole plant exports. The region supplied Taiwan with \$2.2 billion worth of imports comprising petroleum, rubber, logs and other mineral products.

The Middle East absorbed \$1.3 billion worth of Taiwanese goods in 1986 and supplied \$2 billion worth of products to Taiwan.

Some \$4.1 billion worth of Taiwanese goods were exported to Hong Kong and only \$710 million imported from that country in 1987, ranking it well out of the top 10 markets. Much of these exports are suspected to be transshipped to China. Japan and Singapore also serve as transshipment points for Taiwanese exports to China.²¹

Indirect trade between China and Taiwan has reached an estimated \$2.4 billion in 1988, up from \$1.5 billion in 1987. China is now the fifth-largest trading partner of Taiwan, and Taiwan is the sixth-largest trading partner of the mainland. Recently Taiwan had increased the number of raw materials that may be indirectly imported from the mainland, usually by way of Hong Kong.

Taiwan's bilateral trade with Australia has grown at an impressive pace in recent years. Taiwan exported \$870 million worth of goods to Australia in 1986 making this country its eighth largest market. Australia was Taiwan's fifth largest supplier with shipments worth \$918 million in 1987.

The Taiwan-New Zealand two-way trade stood at \$151 million in 1985 of which Taiwanese exports accounted for \$76 million and imports for \$75 million.

Taiwan is promoting a diversification of its trade relationships away from the United States and Japan as excepting these two countries no single country buys more than 4.9 percent of the island's exports. The EC, Canada and Japan in particular are the main alternative Taiwanese markets to the U.S. The fastest growing area for trade is with China.

Buying missions, trade shows and the establishment of representative offices are being used to forge commercial relations with Western and Eastern Europe and Asia. It is setting up a distribution center in Rotterdam to facilitate penetration of the EC market. The island plans to fully utilize its geographic advantage to enhance its importance in the Asian and Pacific region.

Commodity Structure of Trade

Exports. Taiwan's commodity exports have undergone radical changes since 1965 in line with the economic transformation from an agricultural to an industrial base. Agricultural products which formerly accounted for over half of the island's export revenue, have gradually fallen in importance to a mere 3.7 percent in 1987 while industrial goods have assumed a predominant role.

After remaining the island's leading foreign exchange earner for over two decades, Taiwan's textile industry ceded its position to the electronics and electric machinery industry in 1984. Since then electronics and electrical machinery remained the largest export category, totaling \$10.6 billion in 1987 and accounting for 19.8 percent of total exports. With an export value of \$7.8 billion textile products ranked second with a 14.6 percent share in total exports. Other major exports items in descending order of importance were machinery and metal products (\$6.0 billion); plastic products (\$2.6 billion); wood products and furniture (\$2.5 billion); and transportation equipment (\$2.1 billion).

Many of Taiwan's exports occupy first place in the world market in terms of export volume such as tennis rackets, sewing machines, decorative lights, computer monitors, electric fans, silicon rectifying diodes, hats, bicycles, handbags, automobile jacks, sunglasses, footwear, PVC sheets and compounds, bamboo shoots, asparagus, canned and live eel.²² Taiwan is the second largest toy exporter in the world. Due to the strengthening of the NT dollar, several industries, such as footwear and handbags, are finding that their competitiveness has diminished.

Sea products, fresh or chilled and frozen, shrimp, pork, processed vegetables and fruit, canned mushrooms, canned asparagus, fresh vegetables, tea, sugar and sugar preparations are Taiwan's main agricultural exports. Among these processed agricultural products grew in importance relative to those of primary agricultural products. Taiwan has a large fishing fleet allowing it to be an important exporter of fish and other sea products.

The island's pork exports have risen in recent years, reaching 194,000 tons in 1987 but has slipped back to an estimated 180,000 tons in 1988.

Taiwanese efforts to become a supplier of hog breeding stock to Southeast Asia and live hogs had not paid up. Live hog exports dropped from a high of 51,213 head in 1985 to an estimated 8,000 head in 1988.

Poultry meat production has kept pace with consumption and Taiwan has maintained a state of self-sufficiency until 1987.

Taiwan is a substantial net exporter of oranges totaling 14,664 tons in 1985.

Imports. Taiwan sorely lacks natural resources and is heavily dependent on foreign supplies for its needs for energy, capital goods and raw materials. The five largest import items in 1987 were electronic products (\$4.3 billion); chemical raw materials (\$3.6 billion); machinery (\$3.8 billion); crude oil (\$2.5 billion); iron and steel (\$2.3 billion); food, beverages, and tobacco (\$1.5 billion). Of these five items, electronic products and chemical raw materials showed the highest growth rates.²³

Agricultural products make up a relatively small share of the island's total imports. Valued at \$3.9 billion agricultural products accounted for about 11.3 percent of total 1987 merchandise imports.

Soybeans, hides and skins, corn, raw cotton, dairy products, wool, fish meal and wheat are among Taiwan's major agricultural imports, each exceeding \$100 million in 1987. Taiwan needs to import large amounts of feedstuffs (feed grains, soybeans, fish meal) to support livestock production and cotton and hides for the export oriented textile and leather goods industries. Other important agricultural products are beef, apples, grapes, nuts, off-season vegetables, citrus fruits and processed fruit and pig skin.

Livestock. Taiwan's beef production is minimal and consumption needs are met by imports. In 1987 the island imported 39,000 tons of beef the bulk of which (97 percent) was lower quality beef. Imports rose to an estimated 42,000 tons in 1988. In line with national priorities placed on the expansion of dairy and beef production Taiwan imported about 5,000 head of breeding cattle in 1987 of which 4,000 head were dairy cattle. Also, the island has been importing baby chicks and layers and about 26 million pieces of poultry eggs since 1986. It became a small importer (2,000 tons) of poultry meat in 1988, because of trade barriers.

Fruits. Taiwan relies on about 80 percent on imports to meet its apple consumption needs. Taiwan is not ideally suited for growing apples and production costs for apples are quite high. Only steep mountain slopes are sufficiently cool for apple cultivation and they do not lend themselves to mechanization. Virtually all apples in Taiwan are consumed fresh.²⁴ Imports have varied widely since the removal of import controls in 1979, ranging from a high of 78,433 tons in 1982/83 to a low of 45,739 tons in 1984/85. Imports amounted to 86,000 tons in 1987. Taiwanese consumers are quality conscious and willing to pay premium prices for fresh seasonal fruits.

Grapes are Taiwan's second ranking fruit imports after apples. The demand for imported grapes has grown buoyed by rising living standards and inability to produce locally grapes with qualities preferred by consumers.²⁵ About two-thirds of locally produced grapes are for fresh consumption and the remainder is purchased by the Taiwan Tobacco and Wine Monopoly Bureau for wine production. Profitable prices were offered as incentive for

increased domestic grape production in support of the development of a grape wine industry.²⁶ The program was so successful that Taiwan now faces an oversupply in wine. To mitigate the oversupply situation, Taiwanese authorities are promoting the processing of surplus grapes into juice. Taiwanese grape imports have shown a rising trend in the 1980s reaching a record 12,569 tons in 1987.

Taiwan imported 116,609 tons of fresh fruits and nuts worth \$72.3 million in 1987 of which 74 percent (\$53.5 million) came from the U.S. Citrus fruit imports totaled 27,695 tons valued at \$11.5 million, in 1987. The U.S. provided 82 percent of this total. The bulk of citrus fruit imports consisted of grapefruits. Grapefruits gained rapid popularity among Taiwanese consumers since the early 1980 what local production could not satisfy.²⁷ Also, taste-wise locally produced grapefruit is inferior to the imported fruit. Taiwan imports small amounts of oranges whose volume shows a strong inverse relationship with local production. So far lemon consumption is limited to the making of lemonade and similar drinks. Imports were a mere 323 tons in 1985.

Taiwan imported \$52.2 million worth of fresh and preserved vegetables. Only 30 percent of these purchases were of U.S. origin. In 1987, Taiwan's total wine imports surged to 2.12 million liters, valued at \$6.19 million as a result of recent liberalization of wine importing regulations.

Hides and skins. Pig skin production, though sizeable, is still insufficient to meet consumption needs. This is because only the skins of hogs slaughtered for export can be processed into pigskin leather. Pork sold to domestic consumers goes with skin attached (some of it is eaten but most is wasted) and is therefore unavailable for tanning.

Taiwan is a large importer of bovine hides and skins three-fourth of which are used by the shoe industry. A total of 132,000 tons of bovine hides and skins were imported in 1987 with imports varying in line with shoe export sales.

Tallow and grease. Taiwan relies entirely on imports for its inedible tallow and grease requirements. Imports have peaked at 63,000 tons in 1982 and have shown a gradual decline since. The decline is due to lack of growth in domestic soap industry and competition from cheaper substitute raw materials such as fish oil, palm oil, and Asian stearic acid. Also, local soap production has encountered stiff competition from imported soaps.

Country Distribution of Agricultural Trade

Taiwan's agricultural trading partners have been very concentrated. Japan, the U.S., Hong Kong and Singapore are Taiwan's chief agricultural markets. In 1987, the U.S. received 9 percent of total agricultural exports and supplied 42 percent of Taiwan's agricultural imports. The U.S. has been Taiwan's number one agricultural supplier for years and is way ahead of number two, Australia, and number 3, Japan.

Exports. The bulk of Taiwan's pork exports go to Japan. In 1987 pork exports to Japan rose by 56 percent to 134,000 tons representing 70 percent of total exports.²⁸ Low pork prices due to the strong Japanese yen and improved transportation methods (which allow shipment of chilled rather than frozen meat) were helping to expand the Japanese market. Taiwan had 35 percent of the Japanese pork market while the U.S. share dropped to 5 percent. Taiwanese gains seems to have come at the expense of the U.S. market share. In the first half of 1988, Taiwan's exports to Japan have

fallen due to problems with Japanese testing for sulfa residues. By year's end, however, Taiwan has regained its earlier losses and was able to maintain its share of the Japanese market. Reportedly Taiwanese authorities are encouraging export market diversification. Recently Singapore was made an export promotion target for pork but lower market prices prevailing in this market and its distance from Taiwan may limit export growth.

Taiwan exported more than twice as much hog breeding stock than it imported in 1985. Main destinations were the Philippines and Thailand while the U.S. and EC member countries were the import sources. Most live slaughter hogs (50,000 head) went to Hong Kong.

Hong Kong and Singapore are Taiwan's major orange markets.

Imports. The U.S. was the dominant supplier of beef and dairy breeds (Holstein) to Taiwan. Inclusion of some cattle carrying brucellosis reactors, however, gave a bad reputation to U.S. cattle and could jeopardize future sales.

Australia was the leading supplier of lower quality beef with Sweden and New Zealand providing the remainder. Nearly all of the high quality beef (1,736 tons) came from the U.S. and is consumed in hotels and restaurants.

Taiwan has been importing small amounts of chicken meat but imported a record 1,556 tons from the U.S. About 70 percent (93,000 tons) of Taiwan's bovine hide and skin imports came from the U.S. in 1987, and Canada being the second ranking import source.²⁹

Nearly one-half of Taiwan's tallow imports were supplied by the U.S. in recent years with the share varying in relation to prices of products of

competitor supplies. New Zealand and Australia are the other major supplies.

The island's apple imports consist mainly of Red Delicious from the U.S. and Canada, Golden and Starking Delicious from Chile and Fuji from Korea. The bulk of U.S. and Canadian apple exports to Taiwan are shipped during the October-February period and those bought from Chile and New Zealand brought in during March to June.

In 1987 U.S. apples held 51 percent of Taiwan's import market and Chilean apples took 24 percent of total imports. Other suppliers of growing importance are Korea, Canada, and New Zealand. To dominant positions of U.S. apples in Taiwan's market comes from their superior quality and reliability of supplies.

In 1987, the U.S. provided 90 percent of Taiwan's grape imports but U.S. grapes face strong competition from Chile which supplies the same grape varieties and in a season (March-May) when there are no U.S. grapes. The island relies entirely on imports for its raisin needs.

The U.S. supplied 82 percent of Taiwan's 1987 citrus fruit imports and South Africa was the second ranking import source. Seventy four percent of fresh fruits and nuts imported into Taiwan came from the U.S., 48 percent of processed fruit and 30 percent of fresh and prepared vegetable imports.

U.S.-Taiwanese Trade

Taiwanese exports. Main exports from Taiwan to the U.S. are electric/electronic goods, textile products, machinery, footwear, toy and sporting goods. In 1985, Taiwan sold about 1.6 billion square yards of cotton, wool and man-made fiber goods worth \$2.4 billion to the United

States. Under the General System of Preferences (GSP), Taiwan was exempt from paying import duties on roughly 25 percent of its textile exports to the United States.³⁰ It was one of the largest beneficiaries of the program which permitted Taiwan to export about 2,000 items to the U.S. duty free. The U.S. terminated Taiwan's GSP status effective January 1, 1989.

U.S. exports. Nonagricultural products make up the majority of U.S. exports to Taiwan. The leading U.S. industrial exports are electronic goods, chemicals and machinery.

Of the \$7.2 billion worth of 1987 U.S. exports, agricultural products represented \$1.28 billion or 17.7 percent of the total. Although up 9.4 percent from the 1986 level U.S. agricultural exports were still 12.4 percent below the record \$1.46 billion in 1984. Taiwan ranked as the fifth most important U.S. overseas farm market in 1987. The major U.S. exports on a value basis in 1987 (with sales in parentheses) were: soybeans (\$379 million), corn (\$249 million), hides and skins (\$180.9 million), cotton (\$137.5 million), wheat (\$103.6 million), sorghum (\$38.3 million) and noncitrus fruit (\$34.7 million). The U.S. has long been Taiwan's dominant supplier of these commodities. The U.S. share of Taiwan's corn market was 83 percent in 1987, held 93 percent of its wheat market and supplied 71 percent of sorghum imports. U.S. soybeans enjoyed a predominant position in the Taiwanese market accounting for 99 percent of total imports. About 36 percent of Taiwan's raw cotton imports, 71 percent of raw tobacco imports and nearly 50 percent of hides and skin imports came from the U.S.

Taiwan offers a small but growing market for U.S. meats and meat products. Of the \$10.1 million worth of meats shipped in 1987, beef and veal accounted for \$8.8 million and variety meats for \$580,000. U.S.

poultry meat exports reached \$2.0 million in 1987 including \$1.1 million worth of turkey meat (Table 2). The U.S. share in Taiwan's beef and powdered milk markets was small amounting to a mere 5 percent and 10 percent respectively.

Other products of importance are apples, grapes, processed fruit, nuts, citrus fruits, off-season vegetables mainly onions, celery and lettuce (Table 3).

U.S. apples found a growing market in Taiwan with exports totaling 42,701 tons worth \$16.8 million in 1987. These shipments accounted for 20.4 percent of the volume and 17.4 percent of the value of all U.S. apple exports in 1987. Taiwan was the leading export market for U.S. apples in 1987. The quantity of apple imports from the U.S. have varied widely reflecting year-round availability of various domestically produced and imported fruit and competition from other foreign supplies.

The U.S. shipped 11,312 tons of grapes valued at \$11.4 million in 1987 to Taiwan. These represented about 10.5 percent of U.S. grape exports in volume terms and 10 percent in value terms. U.S. grape juice exports, excepting in concentrated not frozen form, have been declining in recent years with a combined value of \$300,000 in 1986.

The volume of U.S. orange exports quadrupled in 1987, reaching a record 7,939 tons valued at \$3.6 million. Nonetheless grapefruits have overtaken oranges in 1987 with U.S. shipments soaring to 13,579 tons and worth \$5.3 million. Florida supplies at least 75 percent and California most of the remaining 25 percent of U.S. grapefruit exports to Taiwan. Most of the small amount of lemon imports comes from the U.S.

Table 2. U.S. Meat and Livestock Product Exports to Taiwan

	Quantity		Value		1986	1987
	1985	1986	1987	1985		
	---- tons ----			----thousand dollars----		
Animals and live products	NA	NA	NA	147,869	205,177	213,475
Animals live-ex poultry (NO)	20,929	6,139	3,912	6,500	7,984	4,562
Cattle and calves, live (NO)	3,686	5,569	3,265	5,721	7,592	4,192
Horses, mules, burros, live (NO)		NA	17	63	NA	
Swine, live (NO)	589	407	322	390	353	263
Meats and meat products	1,993	2,090	2,449	7,019	8,433	20,112
Beef and veal	878	1,318	1,791	4,917	6,693	8,779
Beef and veal, fresh or frozen	857	1,307	1,738	4,788	6,656	8,497
Pork	124	118	164	259	303	351
Pork, fresh or frozen	5	86	134	18	235	292
Variety meats-edible offals	868	426	255	1,647	942	580
Poultry and poultry products	NA	NA	NA	1,722	5,923	7,428
Poultry, live (NO)	157,212	142,696	196,086	876	847	916
Baby chicks (NO)	112,151	127,903	195,414	778	795	914
Poultry meats	40	227	3,323	90	276	2,046
Chickens, fresh or frozen	11	206	1,013	10	220	486
Turkeys, fresh or frozen	22	18	1,556	37	30	1,118
Eggs (NA)	NA	NA	NA	0	26	17
Dairy products	999	5,123	3,399	1,695	3,304	2,523
Evaporated or condensed milk	51	94	59	102	77	41
Nonfat dry milk	0	0	240	0	0	137
Cheese	18	21	33	101	101	107
Whey, fluid or dried	270	3,848	1,884	85	1,357	684
Fats, oils and greases	30,535	21,767	10,647	12,086	6,472	4,687
Tallow, inedible	30,105	21,011	10,375	11,711	6,051	4,352
Hides and skins, incl. furs	NA	NA	NA	116,124	167,251	180,949
Cattle hides, whole (MNO)	2,798	3,561	3,158	112,247	156,521	172,259

Source: U.S. Department of Agriculture, ERS, Foreign Agricultural Trade of the United States, Calendar Year 1986 and 1987 Supplements, Washington, D.C., June 1987 and 1988.

Table 2. U.S. Meat and Livestock Product Exports to Taiwan

	Quantity			Value		
	1985	1986	1987	1985	1986	1987
	----- tons -----			-----thousand dollars----		
Animals and live products	NA	NA	NA	147,869	205,177	213,47
Animals live-ex poultry (NO)	20,929	6,139	3,912	6,500	7,984	4,56
Cattle and calves, live (NO)	3,686	5,569	3,265	5,721	7,592	4,19
Horses, mules, burros, live (NO)	NA	17	63	NA	29	9
Swine, live (NO)	589	407	322	390	353	26
Meats and meat products	1,993	2,090	2,449	7,019	8,433	20,11
Beef and veal	878	1,318	1,791	4,917	6,693	8,77
Beef and veal, fresh or frozen	857	1,307	1,738	4,788	6,656	8,49
Pork	124	118	164	259	303	35
Pork, fresh or frozen	5	86	134	18	235	29
Variety meats-edible offals	868	426	255	1,647	942	58
Poultry and poultry products	NA	NA	NA	1,722	5,923	7,42
Poultry, live (NO)	157,212	142,696	196,086	876	847	91
Baby chicks (NO)	112,151	127,903	195,414	778	795	91
Poultry meats	40	227	3,323	90	276	2,04
Chickens, fresh or frozen	11	206	1,013	10	220	48
Turkeys, fresh or frozen	22	18	1,556	37	30	1,11
Eggs (NA)	NA	NA	NA	0	26	1
Dairy products	999	5,123	3,399	1,695	3,304	2,52
Evaporated or condensed milk	51	94	59	102	77	4
Nonfat dry milk	0	0	240	0	0	13
Cheese	18	21	33	101	101	10
Whey, fluid or dried	270	3,848	1,884	85	1,357	68
Fats, oils and greases	30,535	21,767	10,647	12,086	6,472	4,68
Tallow, inedible	30,105	21,011	10,375	11,711	6,051	4,35
Hides and skins, incl. furs	NA	NA	NA	116,124	167,251	180,94
Cattle hides, whole (MNO)	2,798	3,561	3,158	112,247	156,521	172,25

Source: U.S. Department of Agriculture, ERS, Foreign Agricultural Trade of the United States, Calendar Year 1986 and 1987 Supplements, Washington, D.C., June 1987 and 1988.

Thanks to the market promotion activities of the California Tree Fruit Association and the American Institute in Taiwan, U.S. fresh prunes became an unexpected hit in Taiwan since 1986. U.S. exports rose from 648 tons in 1985 to 5,414 tons in 1987 worth \$4.5 million (Table 2). The 1988 season too has witnessed a further substantial jump in U.S. fresh prune exports to Taiwan.

U.S. wine exports have benefited greatly from the liberalization of Taiwan's import regulations. Shipments rose from 118,000 liters in 1986 to 2.04 million liters worth \$3.3 million in 1987. While the U.S. has become Taiwan's major supplier, France and Germany provided most of the competition.

Taiwan purchased \$9.4 million worth of U.S. nuts and preparations, the bulk of which consisted of almonds (\$6.2 million). Taiwan provided a rather small market for U.S. vegetables and preparations. Canned vegetables valued at \$4 million were the largest export item.

U.S.-Taiwanese agricultural trade relations were strained by the 1984 Rice Agreement which prohibits Taiwan from selling rice to countries with a per capita income of more than \$795. Taiwan is complaining that the measure is designed to protect the U.S.'s share of the world market, while its own surpluses are piling up. Authorities have announced that they will not renew the accord.

Taiwan renewed its five-year grain purchase agreement with the U.S. for a total of 8.6 million tons of corn, 1 million tons of barley, 2.85 million tons of wheat and 5.7 million tons of soybeans between 1986 and 1991.

Taiwanese-Australian trade. The leading Taiwanese industrial exports are electronic goods, chemicals and machinery. Taiwan's main industrial

Table 3. U.S. Fruit and Vegetable Exports to Taiwan

	Quantity			Value		
	1985	1986	1987	1985	1986	1987
	----- tons -----			-----thousand dollars-----		
Fruits and preparations, exc. juice	47,198	74,774	91,942	25,010	48,507	54,274
Fruits, fresh	42,263	67,998	83,473	18,821	41,037	44,137
Fresh citrus fruits	3,295	9,573	22,710	1,576	5,848	9,419
Grapefruit, fresh	960	7,495	13,579	385	4,337	5,315
Oranges and tangerines, fresh	1,920	1,940	7,939	986	1,442	3,562
Apples, fresh	35,367	44,045	42,701	13,210	19,020	16,840
Grapes, fresh	2,709	12,813	11,312	3,004	14,234	11,417
Prunes, fresh	648	1,211	5,414	637	1,405	4,494
Fruits, dried	2,930	2,821	4,170	4,152	3,799	5,795
Raisins, dried	2,332	2,177	3,269	3,482	3,036	4,698
Prunes, dried	581	608	810	625	715	967
Fruits, canned, exc. juice	1,910	3,694	3,726	1,924	3,389	3,637
Fruits, frozen, exc. juice	59	47	208	48	41	229
Fruit juices inc. frozen (HL)	93,107	111,440	134,553	4,093	3,834	5,090
Orange juice (HL)	66,674	84,005	88,850	3,024	2,746	3,210
Wines (HL)	61	118	2,040	162	273	3,284
Nuts and preparations	2,377	2,793	2,818	5,112	6,638	9,395
Almonds (shelled basis)	1,502	1,441	1,419	3,640	4,700	6,220
Walnuts, shelled/unshelled	674	1,067	1,048	873	1,328	1,522
Vegetables and preparations	19,500	27,452	33,600	7,518	11,523	15,667
Vegetables, fresh	1,274	8,379	9,186	407	2,243	2,592
Celery, fresh	345	359	1,476	109	115	613
Lettuce, fresh	223	286	741	91	128	325
Tomatoes, fresh	0	49	20	0	33	35
Vegetables, frozen	298	592	2,627	184	444	1,971
Potatoes, frozen	75	544	1,894	50	387	1,340
Vegetables, canned	5,657	7,066	5,972	2,736	3,295	4,035
Pulses	11,234	8,861	12,885	2,890	2,802	2,853
Tobacco unmanufactured	10,850	6,659	3,068	60,634	41,376	18,016
Cotton, exc. linters	92,806	47,252	164,529	117,422	40,294	137,540
Oilseeds and products	1,362,569	1,761,629	1,879,741	327,294	366,179	389,951
TOTAL agricultural exports	NA	NA	NA	1,230,863	1,170,631	1,285,058

NA-not applicable

Source: U.S. Department of Agriculture, ERS, Foreign Agricultural Trade of the United States, Calendar Year 1986 and 1987 Supplements, Washington, D.C., June 1987 and 1988.

import items from Australia include energy, minerals, basic metals and metallic ores. Processed food, wool, dairy production and grains are the main agricultural imports.

Taiwanese-New Zealand trade. Taiwan's leading imports of industrial goods include textile products, basic metals, pulp and paper, chemical products, wood products, non-metallic minerals, machineries and chemicals. Processed foods and wool, are the main agricultural imports. New Zealand's major import items from Taiwan include textile products, electrical machineries and apparatus, rubber and plastic products, wearing apparel, metal products and machineries.

Trade and Investment Policies

Classification of Imports

Commodities and products imported into Taiwan are classified into three categories: 1. permissible; 2. controlled; and 3. prohibited.³¹

Permissible imports number 26,077 items among 26,763 listed import commodities. The importation of these commodities is open to all traders with the exception of a few raw materials or semi-finished products which are reserved for manufacturing firms.

Controlled imports cover 658 items including military supplies, national defense and communications equipment, explosives, radioactive isotopes and similar items, edible meat offals, certain fish, chicken meat, peanuts, and selected items which compete with local manufactures. These commodities are imported by public trading agencies or by private firms and end-users who need them for their own use.

Prohibited imports number 9 items and involve narcotics, a few chemical compounds which have harmful effects to the environment or human health and certain luxury items. Additionally, imports of chicken meat and peanuts are banned. In response to protests by fruit growers in 1987 the government banned imports of fruit from all suppliers but the U.S. Taiwan imposed a ban on turkey parts in early 1988, following allegations by farmers of dumping of the U.S. birds. The U.S. has threatened to block \$10 million worth of Taiwanese agricultural exports to the U.S. if the restrictions are not rescinded. Subsequently the authorities set a 400 ton import ceiling for U.S. turkey meat effective January 1, 1989 to be increased by 5 percent monthly increments for two years, after which all import restrictions will be lifted. The Central Trust of China is entrusted with the auctioning of the rights to turkey imports. Importers having the rights will then apply to the Board of Foreign Trade for the import permits.

The importation of items listed in the Permissible import category require licenses issued by the Board of Foreign Trade. Exempted from licensing requirements are 8,408 items whose importer has to file an "Application for Letter of Credit" with an authorized bank.

New trade regulations allow license-free imports and exports, except for items related to national security or under quota or hygiene controls.

Tariff Rates

Tariffs rather than quantitative restrictions are Taiwan's principal import barrier.³² Like most developing countries, Taiwan has maintained a high tariff policy on those items they wish to produce themselves. Also, tariffs serve as a means for generating government revenues. In general,

tariff rates are high on items considered luxuries, on high-value processed food products and on horticultural products. Conversely, raw agricultural products are subject to relatively low tariffs. Several bulk commodities are subject to import quotas.³³

Tariffs are calculated on the landed, cif, price of imported goods, or in the absence of such price, on the wholesale market value at the port of importation. Taiwan is not a member of GATT, but in 1979 has agreed to obligations substantially equivalent to those applied to developing countries under the GATT Customs Valuation Code. It has a "two-column" tariff schedule based on the Brussels Tariff Nomenclature (BTN) and the Customs Cooperation Council Nomenclature (CCCN). Imports from countries maintaining normal trade relations and reciprocity with Taiwan are assessed at one set of tariff rates, while those from other countries - including most communist countries, face higher rates.

Taiwan began to liberalize its trade system in the mid-1960s an initiative that has gathered momentum especially since 1984. While the earlier tariff reductions and removal of import controls were motivated by a desire to ensure low-priced food, most recent trade concessions were granted in response to growing complaints and threats of retaliation from the U.S. and other trading partners. Since 1984, Taiwan has cut import duties and has lifted import bans on a broad list of items.³⁴ As a result of tariff reductions, the highest tariff rate has, as of June 1987, been reduced to 58 percent and the real tariff rate to an average of 7.8 percent.

Tariffs were further reduced on more than 3,520 items on January 1988 in an effort to narrow trade gaps with the nation's major trading partners. Under this revision the maximum tariff rate was trimmed from 57.5 percent to

50 percent and the average nominal tariff rate is now under 13 percent.³⁵ The revision also reduced tariffs on 480 agricultural products, with import duties dropping to an average rate of 22.6 percent from 35 percent. Further reductions are planned in 1989 and 1990. In 1986 Taiwan's import tariff revenue totaled \$2.5 billion.³⁶

The mid-1988 tariff rates applied on high-value products and processed food products are still excessively high (Appendix Tables 2-7). Tariff barriers to fruits and vegetables are among the highest for agricultural products. Tariffs on fresh citrus fruits (lemons, oranges and grapefruit) are 25 percent in the March - September season rising to 50 percent in the October - February season. Tariff on apples is currently 50 percent and on fresh grapes 42.5 percent (November 1 - May 30) based on a claimed cif price on the invoice. Tariff on raisins is NT \$4 per kilogram in bulk and NT \$5 per kilogram in box (Appendix Table 2).

While the import ban against U.S. fresh pears was lifted (September 1986), imports must have a phytosanitary document certifying that pears are free of Mexican fruit fly and other insects.

The tariff on fruit juices is 45 percent whereas canned fruits and frozen peaches each face a 40 percent rate.

High quality beef is subject to a NT \$23.80 per kilogram tariff while other beef to a NT \$30 per kilogram rate. This tariff differential acts as an incentive for the importation of high-quality beef. Tariffs on pork and animal offals amounts to 15 percent, on turkey meat 12.5 percent and on chicken meat 40 percent (Appendix Table 6).

Tariff rate for edible and inedible tallow is 13 percent and 5 percent respectively. Cow and buffalo hides are assessed at NT \$0.3 per kilogram while upper leather and sole leather face 4 percent tariffs.

The Taiwan Tobacco and Wine Monopoly Bureau (TTWMB) controls the production, import, distribution and promotion of beer, wine and cigarettes through high tariffs and discriminatory pricing practices. At U.S. prodding on January 1, 1987, tariffs and taxes on imported cigarettes, beer and wine were replaced by a set of single monopoly fees of NT \$830 per 1,000 cigarettes, NT \$119 per liter of wine, NT \$45 per liter of wine coolers, and NT \$30 per liter of beer.³⁷ Potential importers must apply for a license with the TTWMB for a specific quantity of wine. Once the wine enters Taiwan, it may be sold in various TTWMB-approved outlets such as retail grocery stores, supermarkets, department stores, restaurants and hotels. Imported wine must be labeled with the brand name, origin of product, volume, ingredients, alcoholic content and importer's name.³⁸

In addition to formal tariffs, various other charges are levied on imports. There is a uniform harbor construction fee of 0.5 percent charged against the imports dutiable value. Goods entering by air freight or parcel post are exempt from harbor construction fee. Fees for docking, unloading and storage are additional charges.

A deposit of 10 percent of cif value of imported hogs, dairy and beef breeding stock is to be paid but rebated after the stocks are verified as breeders.

The 1988 conference of the ruling Kuomintang party endorsed the development of formal economic ties, including trade ties, with the

mainland. This is expected to speed up trade between the two countries which hitherto was conducted through third parties.

Taiwan is seeking a free trade accord with the U.S. similar to such bilateral agreements between the U.S. and Canada and Israel.

Currency Regulations

In a bid to further liberalize and internationalize its economy, Taiwan has, effective July 15, 1987, formally eased its stringent foreign exchange controls. Under the new rules, the public is permitted to buy, hold and use foreign exchange freely. Companies and individuals will be able to invest a maximum of \$5 million a year, but there are no limits on payments for imports of foreign goods. Previously, all foreign exchange earned had to be converted into Taiwan dollars. The amount of foreign exchange a person can send abroad or take on trips was doubled, from \$5,000 to \$10,000 at a time. Under the new regulations, Taiwan residents can also invest in overseas securities and stock markets through five government designated local banking institutions.

There has also been some opening up of the financial sector to foreign competition. Permission was granted to American insurance companies to do business in Taiwan and foreign banks were allowed to do exchange business in the export processing zones. Also, securities firms were permitted to set up joint ventures here. Some see these moves as the first steps toward enticing Hong Kong financiers who will be looking for safe investments after 1997. There are signs that Hong Kong financiers are eyeing Taiwan as a possible new home.

Foreign Investment Regulations

Taiwan hopes to accelerate the upgrading of its industrial level with foreign investment and with the advanced technology and management skills that go with it. The Company Law and the Statute for Investment by Foreign Nationals (Article 3) sets the rules for foreign investments. Preferred foreign investment projects include 1. productive manufacturing or service enterprises needed in Taiwan; 2. enterprises which have export markets; 3. enterprises which can foster the development and improvement of important industrial, mining and communications facilities; and 4. enterprises which are conducive to the economic and social development of the nation.³⁹

To attract foreign investment overseas investments are accorded the same incentives and privileges as domestic investments by Chinese nationals. Overseas investors may have 100 percent ownership of the enterprises they invest in and can remit all net profits and interest earnings. Total investment capital is allowed to be repatriated at the expiration of one year after the commencement of operation. Investments are protected against government expropriation or requisition for 20 years.

There are important tax incentives for investors such as a five-year holiday on income tax or accelerated depreciation of fixed assets.⁴⁰ Moreover, foreign investors are entitled to exemptions from duties on imports of machinery and equipment needed for the establishment or expansion of plants concerned. Capital goods and raw materials can also be imported duty-free into Export Processing Zones and the Hsinchu Science-based Industrial Park.

Two offices, Industrial Development and Investment Center and Joint Industrial Investment Service Center, offer necessary services to potential investors who plan to set up manufacturing facilities in Taiwan.

Trade Prospects

Overall goals. Taiwan's trade in agricultural products in years ahead will continue to be determined by growth in real income and related changes in consumption pattern, volume and structure of agricultural production and competitiveness of its export products. Taiwan has set-up industrial and agricultural growth and restructuring targets in short and long-term economic development plans. For the 1985-2000 plan period the target average annual economic growth rate (GNP) is set at 6.6 percent. Pursuant this goal Taiwan is to upgrade its industrial structure (toward more capital and technology intensive industries) and speed-up the development of the service sector. Additionally, Taiwan intends to diversity export trade by:

1. shifting export growth targets to Japan and Europe;
2. engaging in barter trade with developing countries;
3. increasing trade with East European countries and China.

The average annual growth rate of agriculture for the 1985-2000 plan period is set at 1.5 percent; crop production up 0.7 percent and livestock production up 2.0 percent annually. Future overall agricultural self-sufficiency is projected to decline slightly below the present level of 93.1 percent to 89.6 percent (Appendix Table 1). Decrease in crop self-sufficiency will not be fully offset by expansion in certain livestock sectors.

Outlook by commodities. For fruits, vegetables, total meat and pork, growth in consumption is expected to outpace the growth in production thus lowering levels of self-sufficiencies and exportable surpluses (Table 4 and Appendix Table 1). While Taiwan is expected to still possess sizable surplus capacity in fruit and vegetables in 2000 its level of pork exports are seen to decrease to about one-third of their 1985 volume. The poultry and egg supply should maintain self-sufficiency. Future growth in pig and poultry production is likely to be slowed by the cost of waste control in particular, pig wastes. Increase in pig production will also hinge on export market potentials for pork in the Japanese market.

For beef and milk the plan foresees rapid increases in production, averaging 10.4 and 11.2 percent a year, raising self-sufficiency rates to 30 and 40 percent respectively (Appendix Table 1). Consumption of beef and dairy products are projected to increase 5.1 and 2.4 percent a year boosted by rising personal incomes a growing popularity of these foods in diets and, growing public awareness of the nutritional value of dairy products.

The responsiveness of consumption to changes in income (or price) as expressed by elasticity coefficients, varied greatly among commodities. High income elasticities are associated with livestock products, ranging from 0.44 for pork to 2.22 for beef (Appendix Table 8). The income elasticity for fruits varies from 0.54 for all fruits to 1.61 for oranges. On the basis of these elasticities and continued rapid growth in incomes, it is apparent that Taiwanese consumers will further diversify diets by shifting away from cereals and starchy foods towards meats, vegetables, fruits and processed convenience foods in general (Table 5).

Other important diet influencing factors are the changing population structure (age); expanding economic and educational opportunities for women and increasing urbanization. An estimated 40 percent of the population is under the age of 20. As in the U.S., fast-food restaurants are very popular with young people, who see them as fashionable places to meet friends. Urbanization and growing women employment are causing shifts to processed and convenience foods and to frequent eating out.⁴¹

Prospects for U.S. Products

Opportunities for American exporters should improve in 1989 and beyond due to: 1. the appreciated exchange value of the Taiwanese currency; 2. planned further trade liberalization measures; and 3. prospects for continued buoyant economic growth. Taken together, the appreciation of Taiwanese currency and tariff reduction can improve the competitiveness of a given American product and thus create favorable export opportunities for the product.

Fresh, frozen and canned fruits and vegetables, nuts, fruit juices and wine have a strong potential in the Taiwanese market. However, U.S. fresh fruits, notably citrus fruits, apples, pears, cherries, grapes, stone fruits and melons as well as fresh vegetables such as onions, lettuce and celery will face increased competition from other low price suppliers. High ocean freight charges are part of the problem. To retain present market shares U.S. exporters must continue to offer high quality products bolstered with market development efforts for name recognition. With ample local juice production, the declining trend in U.S. exports will be difficult to reverse.

Table 4. Targets for Production, Consumption and Net Trade for Selected Commodities, 1985, 1989 and 2000

	1985		Net Trade	1989		Net Trade	2000		Net Trade
	Production	Consumption		Production	Consumption		Production	Consumption	
	-----Thousand tons-----			-----Thousand tons-----			-----Thousand tons-----		
Vegetables	3,461	2,765	696	3,659	3,052	607	4,278	3,889	389
Fruits	1,795	1,640	155	1,989	1,854	135	2,645	2,519	126
Meat	1,349	1,196	153	1,349	1,296	53	1,616	1,611	5
Pork, live weight	988	802	186	963	868	95	1,138	1,083	55
Beef & mutton	5.7	39.5	-33.8	5.8	48.6	-42.8	25	83.3	-58.3
Poultry	355	355	0	380	380	0	453	444	9
Eggs	213	213	0	204	204	0	268	263	5
Milk	82	711	-629	139	788	-649	406	1,014	-608

Source: The Council of Agriculture reports.

There is interest in American convenience foods generated by the growing number of women holding jobs outside the home and introduction of U.S. fast food franchises. Sales prospects are also good for artichokes, frozen potato products, ginseng and alfalfa. The major demand for potato products will come from the rapidly developing fast food industry. Continuing growth in demand for dairy products and beef is expected to sustain the demand for dairy and beef cattle and high-quality hay.

The U.S. should be able to remain Taiwan's largest supplier for wheat, coarse grains, soybeans, cotton, tobacco and cattle hides.

Increased trade with China, Eastern Europe and Third World nations could offset U.S. sales of grains, cotton, leather, lumber and a variety of other raw materials. Best prospects for U.S. non-agricultural products are in the health, energy, transportation, environmental, information processing, communications, electronics, and process control markets.⁴²

The China External Trade Development Council, founded by business associations and supported by the government, is the main trade promotion organization in Taiwan. The Council provides free trade services to foreign businessmen wishing to do business with Taiwan. Services include: reply to trade inquiries related to imports and exports; answer inquiries related to trade laws and regulations; arrange visiting programs or business meetings for foreign trade missions and businessmen; etc.

Table 5. Per Capita Consumption

	Actual 1986	Projected 2000	Average Annual Growth
	--Kilograms per year--		---Percent---
Grains	116.0	99.1	-1.0
Of which			
Rice	85.0	69.6	-1.4
Sugar	24.9	26.2	0.8
Pulses	20.8	21.7	0.4
Vegetables	118.3	153.8	1.1
Fruits	80.2	97.8	1.7
Meat	58.2 ¹	57.4	0.6
Pork	37.9 ¹	34.2	0.6
Beef & mutton	2.3 ¹	3.7	3.8
Poultry	19.0 ¹	19.5	0.3
Eggs	10.4 ¹	11.6	0.2
Fish	38.6	47.4	1.9
Milk	39.1	44.5	1.2
Oils and fats	17.5	15.9	0.5

¹ Refer to 1988 consumption levels

Source: The Council of Agriculture reports.

ENDNOTES

1. Donald A. Sillers. Taiwan: An Export Market Profile. U.S. Department of Agriculture, Economic Research Service, Foreign Agricultural Economic Report No. 185, Washington, D.C. August 1983, p. 12.
2. Anthony Yie-Lang Chan. "Report on Economic Situation of the Republic of China: Taiwan Economy: The Success Story of Dynamic Development," Journal of Agricultural Economics, No. 41, June 1987, p. 73, National Chung Hsing University, Taichung, Taiwan.
3. Such businesses are defined as those having less than \$1.4 million in capital.
4. In 1986, the average factory worker earned \$400 a month.
5. The Hsinchu Science-based Industrial Park, opened in September 1980, serves as a catalyst in restructuring Taiwan's industry. The goal is to attract \$1 billion of foreign and domestic investment into five broad industry sectors: electronics and information processing, precision instruments and machinery, high technology material sciences, energy sciences, aeronautical engineering, and generic engineering. Anthony Yie-Lang Chan. "Report on Economic Situation of the Republic of China: Taiwan Economy: The Success Story of Dynamic Development", op. cit, p. 78.
6. Taiwan's semi-government research organizations, including the Industrial Technology Research Institute, are directed to assist local manufacturers to develop advanced industrial products. The Journal of Commerce, June 4, 1987, p. 4A.
7. In September 1984, the government announced that it would invest an estimated \$20 billion in 14 major projects to be implemented or completed through 1990. These projects include the expansion of the China Steel Corporation, various infrastructure projects and ecological protection.
8. U.S. Department of Commerce, ITA, Foreign Economic Trends and Their Implications for the United States. FET 88-70, Washington, D.C. July 1988, p. 4.
9. The Economist Intelligence Unit, Country Report Taiwan. No. 1-1987, London, 1987, pp. 10-11.
10. Council for Agricultural Planning and Development, CAPD and Agricultural Development in the Republic of China and Taiwan, March 1979-September 1984. Taipei, Taiwan, September 1984, pp. 3-7.

11. Po Chung and Yie-Lang Chan, "National Policy and Strategic Issues of Livestock Development in Taiwan, ROC", Journal of Agricultural Economics, No. 40, December 1986, p. 102. National Chung Hsing University, Taichung, Taiwan.
12. Research has shown that "a 10 percent increase in the off-farm wage entails a 7.4 percent increase in days of off-farm work holding farm characteristics constant." Tso-Kwei Peng and Mei-Yuan Chen. "The Off-Farm Labor Supply of Farmers in Taiwan," Journal of Agricultural Economics, No. 40, December 1986, p. 28.
13. Donald A. Sillers, Taiwan: An Export Market Profile, op. cit. p. 27
14. Po Chung and Yie-Lang Chan. "National Policy and Strategic Issues of Livestock Development in Taiwan, ROC," op. cit., p. 96. Similar conclusions were arrived at by Tso-Kwei Peng in "The Changes of Farm Size in Taiwan," Journal of Agricultural Economics, No. 41, June 1987, p. 14.
15. Initially, a farmer received 1.5 tons of paddy rice and guaranteed prices for horticultural crops grown for each hectare taken out of rice production and 1 ton of paddy rice per hectare converted to corn or sorghum or left idle. Payments for the diversion of riceland to horticultural crops were lowered to 1 ton of rice in 1986.
16. The Hog Production and Marketing Adjustment Program of 1980 divides hog raisers into four categories: farmers who raise hogs as an auxiliary occupation, modernized hog farmers, large-scale hog raisers, and large enterprise hog raisers. Large enterprise raisers will in principle, supply the export market. The largest single pork producer is the Taiwan Sugar Corporation (TSC), a 98-percent Government owned organization which raised some 520,000 head in 1984. The TSC is supposed to run on a business base, however, with no direct Government funding. Council for Agricultural Planning and Development, CAPD and Agricultural Development in the Republic of China on Taiwan, March 1979-September 1984, op. cit., p. 24.
17. Taiwanese reports indicate that this waste control will cost \$2.10-7.90 per head (depending on farm size) if the equipment cost is spread over 10 years.
18. The Taiwan Sugar Corporation has started beef production as a means to diversify and to utilize lands idled by the cutback in sugarcane production. The corporation already produces hogs and pulp in addition to sugar.
19. The impact of the Taiwan dollar's appreciation may not be reflected fully on exports until the end of 1987 because many exporters were able to cushion re-evaluation risks by forward trading their U.S. dollar exposure.

20. Taiwan-based subsidiaries of American companies provided an estimated 25 percent of this nations exports to the United States. Top U.S. companies exporting from Taiwan include General Electric (black and white TV's, color TV components), Texas Instruments (integrated circuits), Digital Equipment (terminals, printers, personal computers) and Atari (video computer systems, home computers). The Wall Street Journal, May 27, 1987, p. 21.
21. U.S. Department of Agriculture, Foreign Agriculture Service. Annual Agricultural Situation Report, TW6009, February 21, 1986, p. 3.
22. China External Trade Development Council, What You Can Buy From Taiwan ROC. Taipei, 1986, p. 7.
23. The sharp increase in the export of computers and peripheral equipment in 1986 necessitated the import of large quantities of electronic components for assembly. Rapid growth of overall export trade also resulted in the sharp increase in the import of chemical raw materials.
24. Per capita consumption is just over 3 kilograms a year.
25. Consumers prefer grapes that are firm, flavorful and convenient to peel. Taiwan consumers customarily peel grapes before eating them and prefer red grapes to green grapes. U.S. Department of Agriculture, FAS, Horticultural Products Review, March 1987, p. 19.
26. Under a 10-year contract signed with farms in 1976 the Taiwan Tobacco and Wine Monopoly Bureau guaranteed to pay 105 percent of the rice price for their grapes meeting a 13 degree brix standard.
27. Grapefruit is being consumed as juicy snack in summer afternoons much the same as watermelon.
28. Estimated percentages of exports by cuts: loin 30; tenderloin 5; Boston butt 40; and ham 25.
29. Although U.S. hides sell at a 10 percent premium importers still prefer them because of their better quality and uniform standards.
30. Under the new three-year U.S.-Taiwan textile pact (1986), exports will grow by only about 0.5 percent a year through 1988, against the 15 percent or so of recent years. As with Hong Kong, previously unrestricted materials including silk blends, linen and ramie are now covered by quota rules.
31. China External Trade Council, Guide to Doing Business With Taiwan Republic of China. Taipei, January 1987, p. 15.
32. Samples without commercial value, advertising materials and catalogues can be imported free of duty.

33. Import quotas approved for 1987 were as follows: soybeans, 1.8 million tons; corn, 2.9 million tons; wheat, 0.7 million tons; barley, 0.4 million tons; and sorghum, 1.3 million tons. Some flexibility is possible for the import quotas.
34. The liberalization campaign in 1984 resulted in the reduction of import duties on more than 1,000 products, elimination of some tax rebate privileges, reduction in customs valuation uplift from 10 to 5 percent, and commitment to eliminate the uplift by 1986. In January 1985, the Government reduced customs tariff on 1,058 items and ordered duty exemption on 35 items, and later in the same year customs duties were reduced on 53 items. In January 1986, tariffs were reduced on 777 items followed by several further tariff reductions on a total of 509 items. In January 1987, there was a general reduction of import tariff on 1,699 items and an exemption of import duty on 15 items totaling 1,714 items. In April, May and June of 1987 tariffs were reduced on 1,533 items.
35. The Journal of Commerce, October 1987, p. 5A.
36. The scheduled tariff revision would lower the governments tariff revenue by an estimated \$333 million.
37. At about \$0.46 a packet, this may well permit cigarettes to sell for about \$0.88 in Taiwan, as compared with \$0.61 for the top local competitor.
38. Leslie Berger. "Its Bottoms Up for U.S. Wines in the Taiwan Market." U.S. Department of Agriculture, FAS, Foreign Agriculture, Washington, D.C., June 1988, p. 19.
39. Further details are given in China External Trade Development Council, Guide to Doing Business With Taiwan Republic of China, op. cit., pp. 50-51.
40. Further details are given in China External Trade Development Council, Guide to Doing Business With Taiwan Republic of China, op. cit., pp. 52-54..
41. The way in which these factors tend to change consumption patterns have been discussed by Annabel Cook and Vicki Kulberg. Taiwan: A Demographic Profile With Implications for Marketing Agricultural Products. IMPACT - International Marketing Program for Agricultural Commodities and Trade. Washington State University, Pullman, Washington, Information Series #9, July, 1986, pp. 9-17.
42. U.S. Department of Commerce, ITA, Foreign Economic Trends and Their Implications for the United States. FET 88-70, Washington, D.C., July 1988, p. 10.

Appendix Table 1. Self-sufficiency in Major
Agricultural Products

	1985	1989	2000
	-----Percent-----		
Total	93.1	91.5	89.6
Cereals	61.9	59.5	53.0
Vegetables	125.2	119.9	110.0
Fruits	109.4	107.3	105.0
Meat	112.8	104.1	100.3
Pork	123.2	110.9	105.0
Beef and mutton	13.4	13.9	30.0
Poultry	100.0	100.0	102.0
Eggs	100.0	100.0	102.0
Milk	11.5	17.6	40.0
Sugar	150.8	127.6	105.0

Source: The Council of Agriculture reports.

Appendix Table 2. Taiwanese Tariffs on Fruit and Nuts

NO.	STAT NO.	COMMODITY	Tariff Rate ¹ Percent
0801		CASHEW NUTS, PINEAPPLES, SHELLED OR NOT, ETC.	
	0300	Pineapples	30
		Cashew Nuts	
	0520	Fresh	30
		Dried	NT\$49/KG OR 30
		Other	
	9910	Avocados, Fresh	40
	9920	Dried	40
0802		CITRUS FRUIT, FRESH OR DRIED	
	0110	Lemons	50 ³
	0210	Oranges	25 ²
		Grapefruit	
	0310	Fresh	50 ³
		Other	
	9910	Fresh	57.5
	9920	Dried	57.5
0804		GRAPES, FRESH OR DRIED	
	0100	Fresh	42.5 ⁴
		Dried	
	0210	In Bulk	NT\$4/KG ²
			WIH
	0220	Packed in Boxes	NT\$5/KG ²
0805		NUTS OTHER THAN THOSE FALLING WITHIN HEADING NO. 0801, FRESH OR DRIED, SHELLED OR NOT	
		Chestnuts	
	0110	Dried	NT\$10/KG OR 30
	0120	Fresh	NT\$11/KG OR 30
		Walnuts (Including shelled)	
	0210	Shelled	10 ²
	0290	Pecans	10
	0410	Almonds, sweet	5
	0420	Almonds, bitter	NT\$6/KG OR 15
	0500	Pistachios	12.5 ²
	0600	Pecans	10

Appendix Table 2. Taiwanese Tariffs on Fruit and Nuts (con't.)

NO.	STAT NO.	COMMODITY	Tariff Rate ¹ Percent
0806		APPLES, PEARS AND QUINCES, FRESH	
	0100	Apples	50
	0200	Pears	50
	0300	Quinces	30
0807		STONE FRUIT, FRESH	
	0300	Cherries	20
	0400	Plums	35
	9900	Peaches, nectarines, apricots	50
0808	0100	Strawberries	50
	9900	Other	50
0809	0100	Honey Dew Melon, Fresh	45 ⁵
	9900	Other	29 ²
0810		FRUIT (WHETHER OR NOT COOKED), PRESERVED BY FREEZING, NOT CONTAINING ADDED SUGAR	
	0100	Cherries	25
	0200	Cranberries	10
	0300	Blueberries	10
	0400	Peaches	30
	9900	Other	30
0811		FRUIT PROVISIONALLY PRESERVED	
	0100	Cherries, maraschino	NT\$25/KG OR 50
	9900	Other	
0812		Prunes, Dried	
	0210	Packed in Boxes	10
	0220	In Bulk	10
	0400	Apricot, dried	10

¹ Tariff rates in effect on January 1987 unless indicated otherwise.

² In effect April 1987.

³ October 1 - February 28

⁴ November 1 - May 30

⁵ June 1 - November 30

Source: AIT, Taipei, Voluntary Report #TW7060; November 16, 1987
AIT, Taipei, Voluntary Report #TW7068; December 9, 1987

Appendix Table 3. Taiwanese Tariffs on Preparations of Vegetables and Fruit

NO.	STAT NO.	COMMODITY	Tariff Rate ¹ Percent
2001		VEGETABLES AND FRUIT, PREPARED OR PRESERVED BY VINEGAR OR ACETIC ACID	
	0100	Vegetables	30
	0200	Fruits	40
2002		VEGETABLES PREPARED OR PRESERVED OTHERWISE THAN BY VINEGAR OR ACETIC ACID	
	0100	Asparagus	10
		Mushrooms	
	0210	Forest Mushroom	40
	0290	Other	40
	0300	Tomato Juice (With dry weight content of 7% or more)	25
	9900	Other	45
2003	0000	FRUIT PRESERVED BY FREEZING, CONTAINING ADDED SUGAR	35
2005	0000	JAMS, FRUIT JELLIES, MARMALADES, FRUIT PUREE AND FRUIT PASTES	45
2006		Fruit, Table and Pie, Preserved, in Bottles or Cans	
	0110	Peaches	40
	0120	Oranges	35
	0191	Mixed Fruit	35
	0200	Ground Nuts, Roasted	50
	0400	Almond Prepared or Preserved	15
	9910	Pistachios	35
2007		FRUIT JUICES (INCLUDING GRAPE MUST) AND VEGETABLE JUICES, WHETHER OR NOT CONTAINING ADDED SUGAR, BUT UNFERMENTED AND NOT CONTAINING SPIRIT	
	0100	Concentrate Fruit Juice For Making Beverages, Not For Immediate Drink	45

Appendix Table 3. Taiwanese Tariffs on Preparations of Vegetables and Fruit (con't.)

NO.	STAT NO.	COMMODITY	Tariff Rate ¹ Percent
		Fruit Juice	
	0210	Orange Juices	45
	0230	Apple Juices	40
	0240	Grape Juices	40
	0250	Cranberry Juices	40
	0290	Other	45
		Vegetable Juice	
	0310	Asparagus Juices	25
	0391	Aloe Vera Juice	45

Source: AIT, Taipei, Voluntary Report #TW7060; November 16, 1987
 AIT, Taipei, Voluntary Report #TW7068; December 9, 1987

Appendix Table 4. Taiwanese Tariffs on Edible Vegetables

NO.	STAT NO.	COMMODITY	Tariff Rate ¹ Percent
0701		VEGETABLES, FRESH OR CHILLED	
	0200	Tomatoes	10
	0300	Asparagus	10
		Mushrooms	50
	0400	Onions	40
	0800	Olives	10
	0900	Celery	30
	1000	Lettuce	30
	9900	Broccoli/cauliflower	40
0702		VEGETABLES PRESERVED BY FREEZING	
	0100	Asparagus	10
	0200	Peas	25
	0300	Potatoes	25 ²
	0400	Corn	30
	0500	Carrots and green beans	20
0703		VEGETABLES PROVISIONALLY PRESERVED IN BRINE, IN SULPHUR WATER OR IN OTHER PRESERVATIVE SOLUTIONS	
	0100	Olives	10
	0300	Tomatoes	10
0704		DRIED, DEHYDRATED OR EVAPORATED VEGETABLES	
	0200	Onions	40
	0700	Flour, Vegetable	50
	0800	Garlic Powder	50
0706	0100	Sweet Potatoes	10
	0200	Water Chestnuts	25

¹ Tariff rates in effect on January 1, 1987, unless indicated otherwise.

² In effect June 1987.

Source: AIT, Taipei, Voluntary Report #TW7060; November 16, 1987
AIT, Taipei, Voluntary Report #TW7068; December 9, 1987

Appendix Table 5. Taiwanese Tariffs on Selected Foodstuffs

NO.	STAT NO.	COMMODITY	Tariff Rate ¹ Percent
1513	0100	SHORTENING	10
1601	0000	SAUSAGES AND THE LIKE, OF MEAT, MEAT OFFAL OR ANIMAL BLOOD	50
1602		OTHER PREPARED OR PRESERVED MEAT OR MEAT OFFAL	
	0100	Boiled bovine meat in cans	40
	0200	Prepared or preserved meat of poultry, swine and bovine animals, including homogenized preparations and mixtures thereof	35
	9900	Other	40
1603	0000	MEAT EXTRACTS AND MEAT JUICES; FISH EXTRACTS	45
1902	0300	INFANT FOOD	15
1905	0000	PREPARED FOODS OBTAINED BY THE SWELLING OR ROASTING OF CEREALS OR CEREAL PRODUCTS (PUFFED RICE, CORN FLAKES AND SIMILAR PRODUCTS)	42.5
1907		BREAD, SHIPS' BISCUITS AND OTHER ORDINARY BAKERS' WARES, NOT CONTAINING ADDING SUGAR, HONEY, EGGS, FATS, CHEESE OR FRUIT	
1908		PASTRY, BISCUITS, CAKES AND OTHER FINE BAKERS' WARES	
	0100	Biscuits	15
	0200	Other bakery products	30
2107	0821	MILK, EVAPORATED	35

¹ Tariff rates in effect in 1986.

Source: AIT, Taipei, Voluntary Report #TW7060; November 16, 1987
AIT, Taipei, Voluntary Report #TW7068; December 9, 1987

Appendix Table 6. Taiwanese Tariffs on Live Animals and Animal Products

NO.	STAT NO.	COMMODITY	Tariff Rate ¹ Percent
LIVE ANIMALS			
0102	0000	LIVE ANIMALS OF THE BOVINE SPECIES	
0103	0000	LIVE SWINE	10
0104	0000	LIVE SHEEP AND GOATS	
0105		LIVE POULTRY, THAT IS TO SAY, FOWLS, DUCKS, GEESE, TURKEYS AND GUINEA FOWLS	
	0100	For breeding	Free
	9900	Other	5
0201		MEAT AND EDIBLE OFFALS OF THE ANIMALS FALLING WITHIN HEADING NO. 0101, 0102, 0103 OR 0104, FRESH, CHILLED OR FROZEN	
		Meat of bovine animals	
	0110	Special quality beef	NT\$23.80/KG
	0190	Other	NT\$30/KG
	0200	Meat of sheep and goats	NT\$15/KG OR 20
	0300	Meat of swine	15
	0400	Meat of horses, asses, mules and hinnies	
	0500	Offals	
0202		DEAD POULTRY AND EDIBLE OFFALS THEREOF (EXCEPT LIVER), FRESH, CHILLED OR FROZEN	
	0100	Fowls	40
	0200	Turkeys	12.5
	0300	Ducks	35
	9900	Other	40
0203		POULTRY LIVER, FRESH, CHILLED, FROZEN, SALTED OR IN BRINE	
	0100	Fresh, chilled or frozen	45
	9900	Other	45
0204	0000	OTHER MEAT AND EDIBLE MEAT OFFALS, FRESH, CHILLED OR FROZEN	45
0205	0000	PIG FAT FREE OF LEAN MEAT AND POULTRY FAT	25

Appendix Table 6. Taiwanese Tariffs on Live Animals and Animal Products
(con't.)

NO.	STAT NO.	COMMODITY	Tariff Rate ¹ Percent
0206		MEAT AND EDIBLE MEAT OFFALS, SALTED, IN BRINE, DRIED OR SMOKED	45
	0100	Bacon, ham	20
	0200	Pork rind	20
	0300	Beef, salted	20
	9900	Other	20

¹ Tariff rates in effect in 1987.

Source: AIT, Taipei, Voluntary Report #TW7060; November 16, 1987
AIT, Taipei, Voluntary Report #TW7068; December 9, 1987

Appendix Table 7. Taiwanese Tariffs on Dairy Products, Eggs and Honey

NO.	STAT NO.	COMMODITY	Tariff Rate ¹ Percent
DAIRY PRODUCTS			
0401		MILK AND CREAM, FRESH, NOT CONCENTRATED OR SWEETENED	
	0100	Milk, fresh	40
	0200	Cream, fresh	20
0402		MILK AND CREAM, PRESERVED, CONCENTRATED OR SWEETENED	
		Milk powder	
		Edible	17.5
	0119	Other	
		Fodder use	
	0129	Other	40
		Milk and cream, evaporated or sterilized	
	0210	Milk, evaporated or sterilized	35
	0220	Cream, evaporated or sterilized	40
	0300	Condensed milk	40
	0400	Fresh milk, sweetened	40
		Dried whey (whey powder)	22.5
	0510	Edible	
		Fodder use	
	0521	Milk powder (containing 5% or more of fish meal, con- taining 8% or more of rape seed meal or containing 3% or more of alfalfa meal)	5
	0529	Other	
0403	0100	Butter	20
	0200	Milk fat, anhydrous	25
0404	0000	Cheese and curd	15
0405	0110	Fresh eggs	30
	0200	Egg yolks	40
0406	0000	NATURAL HONEY	60

¹ Tariff rates in effect in 1986.

Source: AIT, Taipei, Voluntary Report #TW7060; November 16, 1987
 AIT, Taipei, Voluntary Report #TW7068; December 9, 1987

Appendix Table 8. Taiwan: Price and Income
Elasticities of Demand

	Price	Income
	-----Percent-----	
Rice	-0.31	-0.86
Wheat flour	-0.40	0.25
Sugar	-0.55	0.58
Fruits	-0.31	0.54
Orange	-1.76	1.61
Grapefruit	-0.64	0.48
Pork	-0.56	0.44
Beef	-1.87	2.22
Chicken	-0.28	1.35
Duck	-0.28	1.54
Fish	-0.29	0.09
Eggs	-1.81	1.17
Fresh milk ¹	-0.98	1.62
Salad oil	N.A.	1.56

¹ All milk.

N.A.: Not available

Source: Wen-fu Hsu, A Study of Demand for Major
Agricultural Products in Taiwan.

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